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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,723	11/03/2003	Roger Olds	269*11	3537
23416	7590	01/09/2006	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ, LLP			NEGRON, ISMAEL	
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WILMINGTON, DE 19899			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/699,723	OLDS ET AL.	
	Examiner	Art Unit	
	Ismael Negron	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 11 October 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) 1-3 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 4-8 and 11-20 is/are rejected.
 7) Claim(s) 4,7,8,10-18 and 20 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 03 November 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/9/04, 11/7/05</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election with traverse of Group II (claims 4-20) in the reply filed on October 11, 2005 is acknowledged. The traversal is on the ground(s) that determining patentability of each group would address similar issues, and that the fields of search overlap. This is not found persuasive because the apparatuses of groups I and II are clearly different in its mode of operation. The apparatus of Group I (claims 1-3) produces illumination which is independent of the rotational speed of a vehicle wheel, while the apparatus of Group II is specifically controlled by the rotational speed of such vehicle wheel.

2. The requirement is still deemed proper and is therefore made FINAL.

DETAILED ACTION

Title

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **Wheel Rotational Speed Controlled Vehicle Illumination System.**

Abstract

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it fails to concisely state the subject matter of the invention, and it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

The Examiner respectfully suggests amending the abstract as follows:

An illumination system periodically directs a short burst of bright light onto rotating indicia or vehicle design features which makes the indicia or design features appear to be stationary or animated. An exact location of the indicia on the sidewall of the vehicle tire may be determined by an emitter and sensor during each revolution of the tire, and a short burst of bright light is then directed onto the indicia which makes the

~~indicia appear to be stationary or animated. The system may simply comprise a flasher connected to a battery and a control that causes the flasher to periodically flash onto a vehicle wheel and/or tire at a fixed frequency independent of the rotational speed of the wheel. In another embodiment, an~~ An illumination system has a housing that rotates with a vehicle wheel, and the housing has a cavity with lighting and controls within the cavity. Light from the cavity is directed onto a vehicle wheel, and the light flashes in relationship to the rotation speed of the wheel which makes the wheel appear to be stationary or slowly rotate in a backward or forward direction.

Drawings

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "4" has been used to designate "*component*" (paragraph 64, line 7), "*emitter*" (paragraph 67, line 2) and "*hardware*" (paragraph 69, line 2).

In addition, note the following:

- reference character "3", used to designate "*component*" (paragraph 64, line 7), "*detector*" (paragraph 67, line 3) and "*hardware*" (paragraph 69, line 2);

- reference character “2”, used to designate “component” (paragraph 64, line 7), “*LED flashing unit*” (paragraph 67, line 5) and “*hardware*” (paragraph 69, line 1);
- reference character “1”, used to designate “component” (paragraph 64, line 7), “*optical motion detector*” (paragraph 67, lines 5 and 6) and “*hardware*” (paragraph 69, line 1); and
- reference character “M1”, used to designate “*mirror strip*” (paragraph 66, line 4) and “*sensor strip*” (paragraph 68, line 3).

The applicant is advised that the reference characters must be properly applied, with no single reference character being used for two different parts or for a given part and a modification of such part. See MPEP §608.01(g). Correction is required.

6. Applicant is further advised that this action only exemplifies the objections to the drawings, applicant's cooperation is requested in correcting all the occurrences of the cited, or any other errors of which applicant may become aware in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

7. Claims 4, 8 and 11-18 are objected to because of the following informalities:

Claim 4 recites the limitation "*the lighting*" in line 6. There is insufficient antecedent basis for this limitation in the claim. In addition, note claims 11-18, objected for the same reasons as Claim 4.

The cited lack of antecedent instances do not amount to indefiniteness under 35 U.S.C. 112, second paragraph, since is readily apparent that the claims are referring back to the previously recited "*lighting means*" (Claim 4, line 3). However, appropriate correction is required to place the claims in proper form for allowance.

8. Claims 7 and 10 are objected to because of the following informalities: Claim 4 recites the limitation "*the windows*" in line 1. There is insufficient antecedent basis for this limitation in the claim. In addition, note Claim 10, objected for the same reasons as Claim 7.

The cited lack of antecedent instances do not amount to indefiniteness under 35 U.S.C. 112, second paragraph, since is readily apparent that the claims are referring back to the previously recited "*window means*" (Claim 4, line 4). However, appropriate correction is required to place the claims in proper form for allowance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 4, 5, 19 and 20 rejected under 35 U.S.C. 102(b) as being anticipated by PEARSALL et al. (U.S. Pat. 4,775,919).

10. PEARSALL et al. discloses an illumination device having:

- **a housing (as recited in claims 4 and 20)**, Figure 1, reference number 22;
- **the housing being constructed and arranged to rotate with a vehicle wheel (as recited in claims 4 and 20)**, column 3, lines 18-20;
- **a cavity within the housing (as recited in claims 1 and 20)**, as seen in Figure 2A;
- **lighting means (as recited in claims 4 and 20)**, Figure 1, reference number 24;
- **control means (as recited in claims 4 and 20)**, inherent;
- **the lighting and control means being disposed within the cavity (as recited in claims 4 and 20)**, as seen in Figure 2A;
- **window means (as recited in claims 4 and 20)**, as seen in Figure 1;

- **the window means being located in the housing (as recited in claims 4 and 20), as seen in Figure 1;**
- **the window means being for redirecting light from the cavity onto a vehicle wheel (as recited in claims 4 and 20), inherent;**
- **the control means being constructed and arranged to flash the light at a frequency related to the rotational speed of the wheel (as recited in Claim 4), as evidenced by column 4, lines 44-53;**
- **the illumination device being in combination with a vehicle wheel (as recited in Claim 5), column 3, lines 15-20;**
- **the window means extending 360° around the housing (as recited in Claim 19), as seen in Figure 1; and**
- **the control means being constructed and arranged to flash the light at a desired frequency (as recited in Claim 20), as evidenced by column 4, lines 44-53.**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 6-8, 11-13, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over PEARSALL et al. (U.S. Pat. 4,775,919).

12. PEARSALL et al. discloses an illumination device having:

- **a housing (as recited in Claim 4)**, Figure 1, reference number 22;
- **the housing being constructed and arranged to rotate with a vehicle wheel (as recited in Claim 4)**, column 3, lines 18-20;
- **a cavity within the housing (as recited in Claim 4)**, as seen in Figure 2A;
- **lighting means (as recited in Claim 4)**, Figure 4, reference number 45;
- **control means (as recited in Claim 4)**, Figure 4, reference number 33;
- **the lighting and control means being disposed within the cavity (as recited in Claim 4)**, as seen in Figure 2A;
- **window means (as recited in Claim 4)**, as seen in Figure 1;
- **the window means being located in the housing (as recited in Claim 4)**, as seen in Figure 1;
- **the window means being for redirecting light from the cavity onto a vehicle wheel (as recited in Claim 4)**, inherent;
- **the control means being constructed and arranged to flash the light at a frequency related to the rotational speed of the wheel (as recited in Claim 4)**, as evidenced by column 4, lines 44-53;

- **the lighting means including a circular array (as recited in Claim 8), as seen in Figure 4;**
- **the lighting means including light emitting diodes (as recited in claims 8 and 11), as seen in Figure 4;**
- **the lighting means including two circular arrays (as recited in Claim 11), as seen in Figure 4;**
- **a magnet (as recited in Claim 13), Figure 4, reference number 44;**
- **a magnetic sensor (as recited in Claim 13), Figure 4, reference number 34; and**
- **the sensor being on the control means for determining the rotational speed of the vehicle wheel (as recited in Claim 13), as evidenced by Figure 4.**

13. In addition, PEARSALL et al. discloses the lighting and control means rotating with the vehicle wheel (column 5, lines 3-5).

14. PEARSALL et al. discloses all the limitations of the claims, except:

- **the vehicle wheel having spokes (as recited in Claim 6);**
- **the windows opening onto the spokes and spaces in between (as recited in Claim 7);**
- **the lighting means including ultraviolet radiation (as recited in Claim 17); and**

- the lighting means including infrared radiation (as recited in Claim 18).

15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the patented illumination device of PEARSALL et al. with a spoked vehicle wheel (as recited in claims 6 and 7), since the courts have stated that matters relating to ornamentation only which have no mechanical function cannot be relied upon to patentably distinguish the claimed invention from the prior art. *In re Seid*, 161 F.2d 229, 73 USPQ 431 (CCPA 1947). In this case, using the patented device of PEARSALL et al. with a spoked wheel, or any other type of vehicle wheel, would have flown naturally to one of ordinary skill in the art since the type of wheel is not critical to the subject matter of the invention.

16. Regarding the lighting means including ultraviolet (as recited in Claim 17) or infrared radiation (as recited in Claim 18), it would have been an obvious matter of design choice to use UV or IR radiation in the lighting means, since the applicant has not disclosed that UV or IR lighting means solves any problem or is for a particular reason. One of ordinary skill would have been motivated to substitute the lighting means of PEARSALL with prior art lighting means having the claimed specific radiation range as required or desired for a particular application.

17. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over PEARSALL et al. (U.S. Pat. 4,775,919).

18. PEARSALL et al. discloses, or suggests, all the limitations of the claims as detailed in sections 11-15 above, except:

- the control means flashing the lighting means at a frequency equal to the rotational speed of the vehicle wheel to make such wheel appear stationary (as recited in Claim 14);
- the control means flashing the lighting means at a frequency higher than the rotational speed of the vehicle wheel to make such wheel appear to slowly rotate backward (as recited in Claim 15); and
- the control means flashing the lighting means at a frequency lower than the rotational speed of the vehicle wheel to make such wheel appear to slowly rotate forward (as recited in Claim 16).

19. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to flashing the lighting means at a frequency equal to, higher than, or lower than the rotational speed of the vehicle wheel (as recited in claims 14-16), since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2nd 272, 205 USPQ 215 (CCPA 1980). In this case, selecting a specific flashing frequency for the lighting means of PEARSALL et al. would have flown naturally to one of ordinary skill in the art as necessitated by the desired illumination effect.

Relevant Prior Art

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hinrichs (U.S. Pat. 4,381,537), **DiMaggio** (U.S. Pat. 5,016,144), **Chastain** (U.S. Pat. 4,562,516), **Milde** (U.S. Pat. 5,392,200), **Chien** (U.S. Pat. 5,683,164), **Lee** (U.S. Pat. 6,322,237), **Khan** (U.S. Pat. 6,789,928) and **Luo** (U.S. Pat. App. Pub. 2004/0218397) disclose various types of vehicle wheel illumination devices.

Allowable Subject Matter

21. Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

22. The following is an examiner's statement of reasons for allowance:

Applicant teaches a vehicle wheel illumination device having lighting means, and control means constructed and arranged for flashing the lighting means at a frequency related to the rotational speed of the vehicle wheel. The wheel includes a plurality of spokes, the lighting means including a circular array of light emitting diodes (LED). The control means including a battery and a microprocessor.

PEARSALL et al. (U.S. Pat. 4,775,919) discloses a vehicle wheel illumination system having a plurality of circularly arranged LED, powered by a power generating

arrangement driven by the rotation of the vehicle wheel, such LED flashing in response to the rotational speed of the wheel. However, the cited reference fail to individually disclose, or suggest when combined, the control means including a battery and a microprocessor. While control means having batteries and a microprocessors are old and well known in the art, no motivation was found for modifying the system of PEARSALL et al. to include a battery and a microprocessor in the patented structure.

No prior art was found teaching individually, or suggesting in combination, all of the features of the applicants' invention, specifically control means including a battery and a microprocessor in combination with the recited structural limitations of the claimed invention.

23. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negron whose telephone number is (571) 272-2376. The examiner can normally be reached on Monday-Friday from 9:00 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea, can be reached on (571) 272-2378. The facsimile machine number for the Art Group is (571) 273-8300.

25. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications maybe obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, go to <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) toll-free at 866-217-9197.


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